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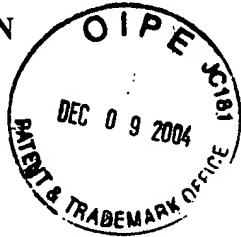
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AF/3714

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: **THORNTON**

SERIAL NO: **09/699,805**

FILED: **10/30/00**



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EXAMINER: SOTOMAYOR

GROUP ART UNIT: 3714

DOCKET: 98006/17UTL

**FOR: APPARATUS FOR SIMULATING A
PULSE AND HEART BEAT AND METHODS
FOR USING SAME TO TRAIN MEDICAL
PROFESSIONALS**

EV 510 916 740 US	CERTIFICATE OF MAIL BY EXPRESS MAIL	9 December 2004
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Robert W. Strozier	Alexandria, VA 22313-1450	Date of Signature

RESPONSE TO A 9 NOVEMBER 2004
NOTIFICATION OF NON-COMPLIANCE WITH 37 CFR 1.192(c)

Applicant submits three copies of a Revised Brief on Appeal in response to the 9 November 2004 Notification of Non-compliance with 37 CFR 1.192(c). Applicant's Revised Brief on Appeal addresses each point in the Notification.

If the Board requires additional information, Applicant's attorney can be reached at 713-977-7000.

Date: **9 December 2004**

Respectfully submitted,

A large, stylized handwritten signature in black ink, likely belonging to Robert W. Strozier.

Robert W. Strozier

Registration No. 34,024

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REVISED BRIEF ON APPEAL

(1) *Real Party in Interest*

The real party in interest is the Board of Regents of the University of Texas System, the assignee of the entire interest in the above application.

(2) *Related Appeals and Interferences*

There are no other appeals or interferences known to appellant, appellant's legal representative or the assignee which will directly affect, or be directly affected by, or have a bearing on the Board's decision in this appeal.

(3) *Status of Claims*

This appeal is from the Final Rejection of all pending claims dated 17 December 2003. Appellant has yet to receive an Advisory Action. The claims at issue are claims 1-2 and 8-27 are pending in the application and are the subject of this appeal. Claims 3-7 were withdrawn from consideration in this application in response to a election restriction

withdrawn from consideration in this application in response to a election restriction requirement. Although Applicant submitted a response to the 17 December 2003 Final Office Action, no claim amendments are submitted. The Response only included arguments in response to the Examiner's positions.

(4) *Status of Amendments*

Claims 1 and 2 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Eggert et al. (US 6193519) in view of Lampotang et al. (US 5769641), where the Examiner contends:

Regarding claim 1, Eggert et al discloses a simulation apparatus comprising a plurality of electronic signals corresponding to a heart beat (Col 4, lines 46-62), a tactile pulse signal to detect a pulse signal discernable by touch (Col 6, lines 26-40), and an audio simulator for generating a heart beat signal (Col 4, lines 46-62). Eggert et al does not specifically disclose the generation of a pulse signal or a correlated heart sound. However, Lampotang et al teaches a simulation system which generates a pulse signal and a synchronized heart sound. Therefore; it would have been obvious to one of ordinary skill in the art at the time of invention to provide a system comprising a plurality of electronic signals corresponding to a heart beat, a tactile pulse signal to simulate a pulse signal discernable by touch, and an audio simulator for generating a correlated heart beat signal. Combining the system disclosed by Eggert et al with the teaching of Lampotang et al produces a system that closely corresponds to a real patient:

Regarding claim 2, Eggert et al discloses a simulation apparatus comprising a plurality of electronic signals corresponding to a heartbeat (Col 4, lines 26-45) distributed in an appropriate fashion, left side or right side, required by the training regimen (Col 6, lines 40-52), and an audio simulator for generating a heart beat signal (Col 4, lines 26-45) that may be heard through a stethoscope. Eggert et al does not specifically disclose the generation of a pulse signal or a correlated heart sound. However, Lampotang et al teaches a simulation system which generates a pulse signal and a synchronized heart sound. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide a system comprising a plurality of electronic signals corresponding to a heart beat, a tactile pulse signal to simulate a pulse signal discernable by touch, and an audio simulator for generating a correlated heartbeat signal in an appropriate position, whether that is the left or right side. Combining the system disclosed by Eggert et al with the teaching of Lampotang et al produces a system that provides more flexibility for training staff.

Claims 1 and 2 were previously amended, but were not amended in Appellant's response to the Examiner's Final Office Action.

Claims 8-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Eggert et al. (US 6193519) in view of Lampotang et al. (US 5769641) and further in view of Takashina et al. (US 6461165), where the Examiner contends:

Regarding claim 9, Eggert et al. discloses that the audio simulator is housed within a housing (Col 4, lines 37-44 and Fig. 2). Eggert et al. does not specifically disclose a tactile simulator housed within a housing. However, Takashina et al. teaches that a tactile simulator may be housed within a housing that simulates a manikin (Col 2, lines 22-35). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide a simulator with audio and tactile simulators housed within a housing. Combining the system disclosed by Eggert et al. with the teaching of Takashina et al. provides a system that is more self-contained and easily used.

Regarding claims 11 and 17, Eggert et al. discloses that the audio simulator housing is contained by a simulator that simulates an upper part of a human body including simulated chest and arm portions (Col 2, lines 27-54 and Figure 2). Eggert et al. does not specifically disclose a tactile simulator housing that is contained by a simulator that simulates an upper part of a human body including simulated chest and arm portions. However, Takashina et al. teaches that a tactile simulator may be housed within a housing that simulates a manikin including simulated chest and arm portions. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide a simulator with audio and tactile simulators housed within a simulator that simulates an upper part of the human body including simulated chest and arm portions. Combining the system disclosed by Eggert et al. with the teaching of Takashina et al. provides a system that better represents the human body.

Regarding claims 8, 10, 13, 16, 19, and 27 Eggert et al. discloses a simulator designed to represent a patient, such as a manikin, with a plurality of sensors and electronic signals to represent a plurality of physical diagnostic signals such as any one of a plurality of body noises including heart and lung sounds (Col 4, lines 46-62). Eggert et al. does not specifically disclose that a tactile pulse simulator comprises any one of a tactile switch, collapsible tube apparatus or piezoelectric transducer (claims 8 and 16) or that the tactile simulator comprises a resilient cover over a tactile switch (claims 10, 13 and 19). However, Takashina et al. teaches that a simulated pulse may be derived

from a collapsible tube apparatus built within a simulator comprising a manikin (Col 2, lines 22-35). Takashina also teaches that the tube apparatus is made of a soft rubber or synthetic resin so as to reproduce feeling in a finger that is similar to the human body diagnosis (Col 2, lines 36-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide a simulator comprising a manikin with a tactile pulse simulator consisting of a collapsible tube apparatus with a resilient cover over a tactile switch. Combining the patient simulator disclosed by Eggert et al with the teaching of Takashina et al produces a training simulator that has the appearance of a human system and provides a realistic pulse tactile signal.

Regarding claim 12, Eggert et al discloses a simulator, apparatus wherein pulse simulation signals are detected in a simulated arm in a first housing and audio is detected from the chest, a second housing (Col 6, lines 27-52). Eggert et al does not specifically disclose that the tactile sensor for the pulse is located in the wrist of the simulator (claim 12). However, Takashina teaches that pulsation sensors are located at all major correspondence points with the human body the simulator is designed to represent (Fig. 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide a simulator wherein the pulse simulator is located in a simulated wrist and the audio simulator located in the chest portion. Combining the simulator disclosed by Eggert et al with the teaching of Takashina produces a simulator that most closely matches the audio and pulsation locations on a human body.

Regarding claim 14, Eggert et al discloses a simulator apparatus wherein pulse simulation signals are detected in a simulated arm in a first housing and audio is detected from the chest (Col 6, lines 26-52). Eggert et al does not specifically disclose that the tactile sensor and the audio sensor are located in two separate housings. However, Takashina teaches that pulsation sensors are located at all major correspondence points with the human body the simulator is designed to represent (Fig. 2) and that the audio sensor may be located in a second housing (Col 2, lines 52-56). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide a simulator wherein the pulse simulator is located in a simulated wrist and the audio simulator located in the chest portion. Combining the simulator disclosed by Eggert et al with the teaching of Takashina produces a simulator that provides a more accurate teaching methodology for students.

Regarding claim 15, Eggert et al discloses a simulator apparatus wherein pulse simulation signals are detected in a simulated arm and audio is detected from the chest (Col 6, lines 26-52). Eggert et al does not specifically disclose that the tactile sensor for the pulse is located in the wrist of the simulator or that the tactile simulator comprises a resilient cover over a tactile switch. However, Takashina teaches that pulsation sensors are located at all

major correspondence points with the human body the simulator is designed to represent (Fig. 2) and that a tube apparatus is made of a soft rubber or synthetic resin so as to reproduce feeling in a finger that is similar to the human body diagnosis (Col 2, lines 36-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide a simulator wherein the pulse simulator is located in a simulated wrist and that the tactile simulator comprises a resilient cover over a tactile switch. Combining the simulator disclosed by Eggert et al with the teaching of Takashina produces a simulator in which diagnosis points are located in a fashion to emulate the human body for better training of medical professionals.

Regarding claims 18, Eggert et al discloses a simulator apparatus wherein pulse simulation signals are detected in a simulated arm (Col 6, lines 26-52). Eggert et al does not specifically disclose that the tactile sensor for the pulse is located in either wrist of the simulator. However, Takashina teaches that pulsation sensors are located at all major correspondence points with the human body the simulator is designed to represent (Fig. 2) including pulsation points in both left and right wrists. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide a simulator wherein the pulse simulator is located in both a right and left simulated wrist in the body of the simulator. Combining the simulator disclosed by Eggert et al with the teaching of Takashina produces a simulator with the ability for multiple use by training professionals.

Regarding claims 20 and 22, Eggert et al discloses a simulator apparatus for generating pulse and heart beat simulations comprising a simulated upper body portion with a chest and left and right arm portions, a playback device for generating electronic signals corresponding to pulse and heartbeat signals, a tactile pulse simulator and a heart beat signal within the chest housing of the simulator with the heart beat detectable by a stethoscope (Col 2 and Col 3). Eggert et al does not specifically disclose a left and right pulse signal, or that the pulse signal is a pressure pulse signal. However, Takashina teaches that a pressure pulse signal may be generated through flexible tubing (Col 2, lines 23-53) and that pulsation signals are sent to detection locations on both the right and left wrist of a manikin simulator (Fig. 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide a training simulator apparatus for generating pulse and heart beat simulations comprising a simulated upper body portion, a playback device for generating electronic signals corresponding to pulse and heartbeat signals, a tactile pulse simulator and a heart beat signal within the chest housing of the simulator with the heart beat detectable by a stethoscope with detectable pulsation signals in a left and right wrist location. Combining the apparatus disclosed in Eggert et al. with the teaching of Takashina produces a training simulator that closely resembles the subjects for which the

simulator is designed providing a realistic training environment for medical professionals.

Regarding claim 21 and 26, Eggert et al discloses a simulator designed to represent a patient, such as a manikin, with a plurality of sensors and electronic signals to represent a plurality of physical diagnostic signals such as any one of pulse, heart beat, or lung sounds (Col 4, lines 25- 62). Eggert et al does not specifically disclose that the tactile, pulse simulator comprises any one of a tactile switch, collapsible tube apparatus or piezoelectric transducer.. However, Takashina et al teaches that a simulated pulse may be derived from a collapsible tube apparatus as a tactile pulse simulator built within a simulator comprising a manikin (Col 2, lines 22-35). Therefore it , would have been obvious to one of ordinary skill in the art at the time of invention to provide a simulator comprising a manikin with a tactile pulse simulator. Combining the patient simulator disclosed by Eggert et al with the teaching of Takashina et al produces a training simulator that has the appearance of a human system and provides a realistic pulse tactile signal.

Regarding claim 23, Eggert et al discloses a simulator apparatus wherein pulse simulation signals are detected in a simulated arm (Col. 6, lines 26-52). Eggert et al does not specifically disclose that the tactile sensor for the pulse is located in either wrist of the simulator. However , Takashina teaches that pulsation sensors are located at all major correspondence points with the human body the simulator is designed to represent (Fig. 2) including pulsation points in both left and right wrists. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide a simulator wherein the pulse simulator is located in both a right and left simulated wrist in the body of the simulator. Combining the simulator disclosed by Eggert et al with the teaching of Takashina produces a simulator with the ability for multiple use by raining professionals.

Regarding claim 24, Eggert et al discloses a simulator apparatus wherein pulse simulation signals are detected in a simulated arm and audio is detected from the chest (Col 6, lines 26-52). Eggert et al does not specifically disclose that the tactile sensor for the pulse is located in the wrist of the simulator or that the tactile simulator comprises a resilient cover over a tactile switch. However, Takashina teaches that pulsation sensors are located at all major correspondence points with the human body the simulator is designed to represent (Fig. 2) and that a tube apparatus is made of a soft rubber or synthetic resin so as to reproduce feeling in a finger that is similar to the human body diagnosis (Col 2, lines 36-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide a simulator wherein the pulse simulator is located in a simulated wrist and that the tactile simulator comprises a resilient cover over a tactile switch. Combining the simulator disclosed by Eggert et al with the teaching of

Takashina produces a simulator in which diagnosis points are located in a fashion to emulate the human body for better training of medical professionals.

Regarding claim 25, Eggert et al discloses a simulator apparatus for generating pulse and heart beat simulations comprising a simulated upper body portion with a chest and left and right arm portions, a playback device for generating electronic signals corresponding to pulse and heartbeat signals, a tactile pulse simulator and a heart beat signal withing the chest housing of the simulator with the heart beat detectable by a stethoscope (Col 2 and Col 3). Eggert et al does not specifically disclose a left and right pulse signal, or that the pulse signal is a pressure pulse signal. However, Takashina et al teaches that a pressure pulse signal may be generated through flexible tubing (Col 2, lines 25-53) and that pulsation signals are sent to detection locations on both the right and left wrist of a manikin simulator (Fig. 2). Therefore, it would have been obvious to one of ordinary skill in the art to provide a simulator apparatus for generating pulse and heart beat simulations comprising simulated upper body portion with a chest and left and right arm portions, a playback device for generating electronic signals corresponding to pulse and heartbeat signals, a tactile pulse simulator and a heart beat signal within the chest housing of the simulator with the heart beat detectable by a stethoscope as disclosed by Eggert et al with detectable pulsation signals in a left and right wrist location as taught by Takashina et al for the purposes of producing a training simulator that closely resembles the subjects for which the simulator is designed providing a realistic training environment for medical professionals.

Claims 8-27 where either previously amended or previously added, but were not amended in Appellant's response to the Examiner's Final Office Action.

(5) *Summary of Invention*

The present invention relates to apparatuses for simulating a pulse and correlated heart sounds so that medical students can be trained in the proper use of a stethoscope and touch (feeling either a right side pulse or a left side pulse) to recognize and identify cardiovascular disorders and diseases. See *e.g.*, Page 1, ll. 7-12; Page 5, l. 19 to 6, l. 9; and Page 64, ll. 8 to Page 69, l. 6, Figures 25-32 and the relevant reference numerals are . The heart sounds are actual recording of heart sounds from patients with normal or abnormal cardiovascular functions. See Page 9, ll. 12-15. The heart sounds are reproduced on a unit having a

microphone in electronic communication with a playback unit. See Figure 25 numeral 102. The heart sounds unit has an area upon which the working end of a stethoscope is rested. See Figure 25, numeral 204. The correlated patient's pulse is generated by a tactile unit having a tactile device that generated pulses discernible to a finger placed properly over the tactile device. See, e.g., Figure 25, numeral 206. The tactile device is also in electronic communication with the playback unit. See, e.g., Figures 25-32. Thus, when the playback unit is activated, specific recorded heart sounds are forwarded to the heart sound unit and correlated pulse commands are sent to the pulse simulation unit. See *e.g.*, Page 1, ll. 7-12; Page 64, ll. 8 to Page 69, l. 6. A medical student then places the working end of his/her stethoscope on the heart sound unit hearing area and places a finger on the pulse simulator. See *e.g.*, Page 1, ll. 7-12; Page 64, ll. 8 to Page 69, l. 6. The invention can use a single pulse simulator or two pulse simulators; one for simulated right side pulse and one for simulated left side pulse. See, e.g., Page 11, l. 14 to Page 12, l. 12. Preferably, the invention has both a right side and a left side pulse so that medical students can switch back and forth between right side and left side simulated pulses. See, e.g., Figures 25-32. Certain cardiovascular disorders are more easily discerned by noting a difference between the right side pulse and correlated heart sounds and the left side pulse and correlated heart sounds. See, e.g., Page 5, l. 19 to Page 6, l. 9.

(6) *Issues*

(A) Whether the inventions encompassed by claims 1 and 2 and 8-27 are patentable over Eggert et al. (US 6193519) in view of Lampotang et al. (US 5769641) or Eggert et al. (US 6193519) in view of Lampotang et al. (US 5769641) and further in view of Takashina et al. (US 6461165), respectively as set forth in the Examiner's contentions included above.

(7) *Grouping of Claims*

All claims relate to apparatuses for simulating heart sounds and correlated simulated pulses using a playback unit, a heart sound generator unit to be heard through a stethoscope

and at least on pulse simulations unit for producing touch discernible pulses correlated to the heart sounds. The playback unit sends electronic singles to each unit.

(8) *Argument*

(A) Arguments relative to All Claim At Issue

9. Although the following arguments are relevant to all claims, Applicant asserts that the claims do not stand or fall together, but are to be considered separately.

10. Appellant disagrees with the Examiner's reading of the primary reference Eggert et al. While Eggert et al. does produce heart and other chest sounds, it does not disclose the generation of a simulated pulse using a tactile device. However, the Examiner contends that Eggert et al. does disclose the use of a tactile device capable of generating a simulated pulse. This reading of Eggert et al. is simply wrong. The only disclosure in Eggert et al. to a tactile device is to a simple tactile ON/OFF device to evidence a correct contact between the simulated finger and a finger cuff. The tactile ON/OFF switches of Eggert et al. are designed to ensure proper attachment of the cuffs **18d** and **18e** to the manikin:

FIGS. 5a-5d illustrate details of the **BP cuff 18d** and the **pulse oximeter finger cuff 18e**. The cuffs **18d**, **18e** are configured together wherein a cable **86** is provided that connects to the BP/OSAT/HEARTRATE port **48** and bifurcates into the respective cuffs. Electrical leads **86a** and **86b** connected to the respective cuffs **18d** and **18e** are depicted at one end of the cable **86** in FIG. 5b for connection to the EKG port **48** (FIG. 3). As shown in FIGS. 5c-5d with respect to the finger cuff **18e**, a *tactile switch 88* connected to a line **90** of the cable **86** is *mounted in the finger cuff and is activated to complete a circuit when the cuff is secured properly with velcro* (male) **91a** and velcro (female) **91b** to the finger of the manikin **28**. Similar switch circuitry, though not shown, is contained in the BP cuff **18d**.

Eggert et al. at Col. 6, ll. 26-40 (emphasis added). The cuffs of Eggert et al. are associated with an oximeter device and a blood pressure device. An oximeter device is defined as follows: "A photoelectric device that measures the amount of oxygen in blood and other fluids." <http://www.books.md/O/dic/oximeter.php>. The switches of Eggert et al. are designed solely to complete a circuit, not to generate touch discernable simulated pulse. In fact, the Eggert et al. switch is incapable of generating pulses. While a blood pressure device

is designed to measure blood pressure. **The only purpose the tactile switches of Eggert et al. serve is to ensure that the student can properly attach an oximeter to the finger of a patient and to properly attach a blood pressure device to a patient. These switches are not designed to reproduce a pulse, i.e., generate touch discernible pressures pulses.** The Examiner's position on this matter is simply unsupported by the disclosure of Eggert et al. Eggert et al. simply does not disclose, teach or suggest an apparatus including a tactile response system for generating a touch discernible pulse simulation and an audio response system for reproducing heart sounds in a correlated manner.

11. Moreover, Eggert et al. uses virtual instruments. The entire purpose of the present invention is to require a student to use his/her senses and an actual stethoscope to learn the proper use of the stethoscope in the care and early diagnosis of metal diseases and dysfunctions. The problem solved by this invention is the fact that medical students often graduate without basic skills in utilizing their fingers and a stethoscope as a first line diagnostic for detecting heart and/or circulatory abnormalities. Using virtual instruments regardless of their sophistication does not over come this problem.

12. Nothing in Eggert et al. discloses, teaches or suggests combining two different sensory output devices (speaker and a tactile output device) to educate a student on the proper use of a hands on technique for front line diagnostics using correlated output signals. **Again, Eggert et al. only uses tactile switches to complete a circuit ensuring that the student has properly positioned an oximeter - oxygen sensor and a blood pressure device on a simulated patient.**

13. Lampotang et al. does nothing to eliminate the basic deficiencies of Eggert et al. While Lampotang et al. does relate to a simulator for simulating human responses during medical procedures, the manikin is capable of generating lung and heart sounds, but only the lung sounds are synchronized with anything: "normal and abnormal breath sounds are synchronized with the bellows movement." Lampotang et al. at Col. 12, ll. 38-40. As far as Applicant's attorney can determine, the Lampotang et al. manikin does not include any tactile output devices. Applicant's attorney searched the patent extensively for every conceivable

verbal description of such as a device and found none.

14. **Therefore, a combined Eggert et al. and Lampotang et al. device would have no mechanism of outputting a touch discernible pulse simulation correlated to heart sounds, because neither reference includes a device that a student can touch and discern a pulse.** Thus, the combined device fails to include or suggest a touch output device or correlating touch and sound, the two key ingredients in a device of this invention designed to train medical students in the proper use of a stethoscope and touch as a front line diagnostic.

(A) Arguments Specific to Claim 1

15. As to claim 1, Eggert et al. in view of Lamgotang et al. combine to form a bellowed body part that have heart sounds and breathing sounds, but not correlated pulse. Claim 1 includes a simple device including a playback unit supplying singles to an audio unit and a tactile unit. The audio unit includes a surface on which a stethoscope listening end is placed and a touch pad on which a finger is rested. The playback unit then generates signals that produce heart sounds and temporally correlated pulses. A medical student is then taught how to properly interpret such heart sounds and pulse rhythms.

Arguments Specific to Claim 2

16. As to claim 2, Eggert et al. in view of Lamgotang et al. again combine to form a bellowed body part that have heart sounds and breathing sounds, but not correlated pulse. Claim 2 includes another simple device including a playback unit supplying singles to an audio unit and two tactile units, one for a right side pulse and one for a left side. The audio unit includes a surface on which a stethoscope listening end is placed and a touch pad on which a finger is rested. The playback unit then generates signals that produce heart sounds and temporally correlated pulses. A medical student is then taught how to properly interpret such heart sounds and pulse rhythms. Using two tactile devices, medical students are taught to recognize certain disorders that relate to differences in the right side and left side pulse rhythms.

Issues Relating to Claims 8-27

17. Although the following arguments are relevant to claims 1 and 2, Applicant asserts that claim 1 and claim 2 do not stand or fall together, but are to be considered separately.
18. Applicant reasserts its arguments relative to Eggert et al. and Lamgotang et al. here.
19. Applicant hereby formally **antedates** Takashina et al. as the date of invention is prior to the July 6, 1999 United States filing date of Takashina et al. as evidenced by the attached invention disclosure statement for the University of Texas Medical Branch.
20. But even if one includes Takashina et al., Takashina et al. uses air to generate a simulated pulse "**without generating any mechanical vibration.**" Takashina et al. at Col 2, ll. 24-25 (emphasis added). Adding Takashina et al. to Eggert et al. and Lampotang et al. gives rise to an air activated pulse/heart sound simulator. But Takashina et al. requires pulse generation without **mechanical vibration**. This teaches squarely away from the present invention that generates a mechanical vibration in the form of a tactile output producing a mechanical vibration or pulses in a material such as a piezoelectric transducer to simulate a pulse.
21. The present invention is further distinguished from these references in that the pulses are mechanically generated by a touch discernible tactile subsystem and the pulse is correlated with heart sounds generated by an audio subsystem discernible with a stethoscope. The apparatus requires the medical students to use their hears (through a real stethoscope) and their sense of touch (through a tactile pulse generator) to learn to identify normal and abnormal cardiovascular properties. Nothing in these references discloses, teaches or suggests such a simple and straight forward approach.
22. While it is true that the apparatus can be part of a simulated body part. The apparatus works for its intended purpose with a playback unit connected to a heart sound unit and a pulse simulation unit simply placed on a table.
23. Appellant believes that the apparatuses of this invention are patentably distinct over the cited references for all the stated reasons and urge reversal of the Examiner's Final Rejection.

Arguments Specific to Claim 8

24. Referring to claim 8, while Eggert et al. discloses a tactile switch and claim 8 indicates that the tactile device can be a tactile switch, the term tactile switch as used in Eggert et al. and the present application are different. The Eggert et al. tactile switch is used simple to complete a circuit, while the tactile switch to the present invention is "a tactile switch that springs out in response to an electric pulse signal." See, *e.g.*, Page 13, line 3. Thus, the tactile switch of this invention is designed to receive an electrical signal from a playback device and produce a pulse rhythm. The Eggert et al. device simply completes a circuit. Eggert et al. does not disclose, teach or even suggest such a tactile device and the inclusion of such a device in the Eggert et al. apparatus would wholly eviscerate the purpose of the Eggert et al. apparatus.

25. Combining Eggert et al. and Lamgotang et al. still does not produce a device which generates heart sounds discernible using a stethoscope and temporally correlated pulse rhythms discernible by touch to instruct medical students on the proper use of a stethoscope and how to use a stethoscope in conjunction with touch to diagnosis cardiovascular disorders or diseases. With the antedating of Takashina et al., the Examiner has no support for a pulse simulation system, a system lacking from the combination of Eggert et al. and Lamgotang et al.

Arguments Specific to Claim 9

26. Referring to claim 9, the combination of Eggert et al. and Lamgotang et al. does not produce a device which generates heart sounds discernible using a stethoscope and temporally correlated pulse rhythms discernible by touch contained in a housing to instruct medical students on the proper use of a stethoscope and how to use a stethoscope in conjunction with touch to diagnosis cardiovascular disorders or diseases. With the antedating of Takashina et al., the Examiner has no support for a pulse simulation system, a system lacking from the combination of Eggert et al. and Lamgotang et al.

Arguments Specific to Claim 10

27. Referring to claim 10, while Eggert et al. discloses a tactile switch and claim 11 indicates that the tactile device can be a tactile switch, the term tactile switch as used in

Eggert et al. and the present application are different. The Eggert et al. tactile switch is used simple to complete a circuit, while the tactile switch to the present invention is "a tactile switch that springs out in response to an electric pulse signal." See, *e.g.*, Page 13, line 3. Thus, the tactile switch of this invention is designed to receive an electrical signal from a playback device and produce a pulse rhythm. The Eggert et al. device simply completes a circuit. Eggert et al. does not disclose, teach or even suggest such a tactile device and the inclusion of such a device in the Eggert et al. apparatus would wholly eviscerate the purpose of the Eggert et al. apparatus. Moreover, Eggert et al. does not disclose, teach or suggest a resilient cover covering "a tactile switch that springs out in response to an electric pulse signal." See, *e.g.*, Page 13, line 3.

28. Combining Eggert et al. and Lamgotang et al. still does not produce a device which generates heart sounds discernible using a stethoscope and temporally correlated pulse rhythms discernible by touch to instruct medical students on the proper use of a stethoscope and how to use a stethoscope in conjunction with touch to diagnosis cardiovascular disorders or diseases. With the antedating of Takashina et al., the Examiner has no support for a pulse simulation system, a system lacking from the combination of Eggert et al. and Lamgotang et al.

Arguments Specific to Claim 11

29. Referring to claim 11, the combination of Eggert et al. and Lamgotang et al. does not produce a device, even one using simulated body parts, which generates heart sounds discernible using a stethoscope and temporally correlated pulse rhythms discernible by touch contained in a housing to instruct medical students on the proper use of a stethoscope and how to use a stethoscope in conjunction with touch to diagnosis cardiovascular disorders or diseases. With the antedating of Takashina et al., the Examiner has no support for a pulse simulation system, a system lacking from the combination of Eggert et al. and Lamgotang et al.

Arguments Specific to Claim 12

30. Referring to claim 12, the combination of Eggert et al. and Lamgotang et al. does not

produce a device, even one using simulated body parts, which generates heart sounds discernible using a stethoscope and temporally correlated pulse rhythms discernible by touch contained in a housing to instruct medical students on the proper use of a stethoscope and how to use a stethoscope in conjunction with touch to diagnosis cardiovascular disorders or diseases. With the antedating of Takashina et al., the Examiner has no support for a pulse simulation system, a system lacking from the combination of Eggert et al. and Lamgotang et al.

Arguments Specific to Claim 13

30. Referring to claim 13, the combination of Eggert et al. and Lamgotang et al. does not produce a device, even one using simulated body parts, which generates heart sounds discernible using a stethoscope and temporally correlated pulse rhythms discernible by touch contained in a housing to instruct medical students on the proper use of a stethoscope and how to use a stethoscope in conjunction with touch to diagnosis cardiovascular disorders or diseases.

31. While Eggert et al. discloses a tactile switch and claim 13 indicates that the tactile device can be a tactile switch, the term tactile switch as used in Eggert et al. and the present application are different. The Eggert et al. tactile switch is used simple to complete a circuit, while the tactile switch to the present invention is "a tactile switch that springs out in response to an electric pulse signal." See, *e.g.*, Page 13, line 3. Thus, the tactile switch of this invention is designed to receive an electrical signal from a playback device and produce a pulse rhythm. The Eggert et al. device simply completes a circuit. Eggert et al. does not disclose, teach or even suggest such a tactile device and the inclusion of such a device in the Eggert et al. apparatus would wholly eviscerate the purpose of the Eggert et al. apparatus. Moreover, Eggert et al. does not disclose, teach or suggest a resilient cover covering "a tactile switch that springs out in response to an electric pulse signal." See, *e.g.*, Page 13, line 3.

32. Combining Eggert et al. and Lamgotang et al. still does not produce a device which generates heart sounds discernible using a stethoscope and temporally correlated pulse rhythms discernible by touch to instruct medical students on the proper use of a stethoscope

and how to use a stethoscope in conjunction with touch to diagnosis cardiovascular disorders or diseases. With the antedating of Takashina et al., the Examiner has no support for a pulse simulation system, a system lacking from the combination of Eggert et al. and Lamgotang et al.

Arguments Specific to Claim 14

33. Referring to claim 14, the combination of Eggert et al. and Lamgotang et al. does not produce a device which generates heart sounds discernible using a stethoscope and temporally correlated pulse rhythms discernible by touch where the heart sound generator and the tactile device are in different housing to instruct medical students on the proper use of a stethoscope and how to use a stethoscope in conjunction with touch to diagnosis cardiovascular disorders or diseases. With the antedating of Takashina et al., the Examiner has no support for a pulse simulation system, a system lacking from the combination of Eggert et al. and Lamgotang et al.

Arguments Specific to Claim 15

34. Referring to claim 15, the combination of Eggert et al. and Lamgotang et al. does not produce a device, even one using simulated body parts, which generates heart sounds discernible using a stethoscope and temporally correlated pulse rhythms discernible by touch contained in a housing to instruct medical students on the proper use of a stethoscope and how to use a stethoscope in conjunction with touch to diagnosis cardiovascular disorders or diseases. With the antedating of Takashina et al., the Examiner has no support for a pulse simulation system, a system lacking from the combination of Eggert et al. and Lamgotang et al.

Arguments Specific to Claim 16

35. Referring to claim 16, while Eggert et al. discloses a tactile switch and claim 16 indicates that the tactile device can be a tactile switch, the term tactile switch as used in Eggert et al. and the present application are different. The Eggert et al. tactile switch is used simple to complete a circuit, while the tactile switch to the present invention is "a tactile switch that springs out in response to an electric pulse signal." See, *e.g.*, Page 13, line 3.

Thus, the tactile switch of this invention is designed to receive an electrical signal from a playback device and produce a pulse rhythm. The Eggert et al. device simply completes a circuit. Eggert et al. does not disclose, teach or even suggest such a tactile device and the inclusion of such a device in the Eggert et al. apparatus would wholly eviscerate the purpose of the Eggert et al. apparatus.

36. Combining Eggert et al. and Lamgotang et al. still does not produce a device which generates heart sounds discernible using a stethoscope and temporally correlated pulse rhythms discernible by touch to instruct medical students on the proper use of a stethoscope and how to use a stethoscope in conjunction with touch to diagnosis cardiovascular disorders or diseases. With the antedating of Takashina et al., the Examiner has no support for a pulse simulation system, a system lacking from the combination of Eggert et al. and Lamgotang et al.

Arguments Specific to Claim 17

37. Referring to claim 17, the combination of Eggert et al. and Lamgotang et al. does not produce a device, even one using simulated body parts, which generates heart sounds discernible using a stethoscope and temporally correlated pulse rhythms discernible by touch contained in a housing to instruct medical students on the proper use of a stethoscope and how to use a stethoscope in conjunction with touch to diagnosis cardiovascular disorders or diseases. With the antedating of Takashina et al., the Examiner has no support for a pulse simulation system, a system lacking from the combination of Eggert et al. and Lamgotang et al.

Arguments Specific to Claim 18

38. Referring to claim 18, the combination of Eggert et al. and Lamgotang et al. does not produce a device, even one using simulated body parts, which generates heart sounds discernible using a stethoscope and temporally correlated pulse rhythms discernible by touch contained in a housing to instruct medical students on the proper use of a stethoscope and how to use a stethoscope in conjunction with touch to diagnosis cardiovascular disorders or diseases. With the antedating of Takashina et al., the Examiner has no support for a pulse

simulation system, a system lacking from the combination of Eggert et al. and Lamgotang et al.

Arguments Specific to Claim 19

39. Referring to claim 19, while Eggert et al. discloses a tactile switch and claim 19 indicates that the tactile device can be a tactile switch, the term tactile switch as used in Eggert et al. and the present application are different. The Eggert et al. tactile switch is used simple to complete a circuit, while the tactile switch to the present invention is "a tactile switch that springs out in response to an electric pulse signal." See, *e.g.*, Page 13, line 3. Thus, the tactile switch of this invention is designed to receive an electrical signal from a playback device and produce a pulse rhythm. The Eggert et al. device simply completes a circuit. Eggert et al. does not disclose, teach or even suggest such a tactile device and the inclusion of such a device in the Eggert et al. apparatus would wholly eviscerate the purpose of the Eggert et al. apparatus. Moreover, Eggert et al. does not disclose, teach or suggest a resilient cover covering "a tactile switch that springs out in response to an electric pulse signal." See, *e.g.*, Page 13, line 3.

40. Combining Eggert et al. and Lamgotang et al. still does not produce a device which generates heart sounds discernible using a stethoscope and temporally correlated pulse rhythms discernible by touch to instruct medical students on the proper use of a stethoscope and how to use a stethoscope in conjunction with touch to diagnosis cardiovascular disorders or diseases. With the antedating of Takashina et al., the Examiner has no support for a pulse simulation system, a system lacking from the combination of Eggert et al. and Lamgotang et al.

Arguments Specific to Claim 20

40. As to claim 20, Eggert et al. in view of Lamgotang et al. again combine to form a bellowed body part that have heart sounds and breathing sounds, but not correlated pulse. Claim 20 includes a more complex device including a playback unit supplying singles to an audio unit and two tactile units, one for a right side pulse and one for a left side all situated in simulated body parts. The audio unit includes a surface on which a stethoscope listening

end is placed and a touch pad on which a finger is rested. The playback unit then generates signals that produce heart sounds and temporally correlated pulses. A medical student is then taught how to properly interpret such heart sounds and pulse rhythms. Using two tactile devices, medical students are taught to recognize certain disorders that relate to differences in the right side and left side pulse rhythms.

Arguments Specific to Claim 21

41. Referring to claim 21, while Eggert et al. discloses a tactile switch and claim 21 indicates that the tactile device can be a tactile switch, the term tactile switch as used in Eggert et al. and the present application are different. The Eggert et al. tactile switch is used simple to complete a circuit, while the tactile switch to the present invention is "a tactile switch that springs out in response to an electric pulse signal." See, *e.g.*, Page 13, line 3. Thus, the tactile switch of this invention is designed to receive an electrical signal from a playback device and produce a pulse rhythm. The Eggert et al. device simply completes a circuit. Eggert et al. does not disclose, teach or even suggest such a tactile device and the inclusion of such a device in the Eggert et al. apparatus would wholly eviscerate the purpose of the Eggert et al. apparatus.

42. Combining Eggert et al. and Lamgotang et al. still does not produce a device which generates heart sounds discernible using a stethoscope and temporally correlated pulse rhythms discernible by touch to instruct medical students on the proper use of a stethoscope and how to use a stethoscope in conjunction with touch to diagnosis cardiovascular disorders or diseases. With the antedating of Takashina et al., the Examiner has no support for a pulse simulation system, a system lacking from the combination of Eggert et al. and Lamgotang et al.

Arguments Specific to Claim 22

42. Referring to claim 22, the combination of Eggert et al. and Lamgotang et al. does not produce a device, even one using simulated body parts, which generates heart sounds discernible using a stethoscope and temporally correlated pulse rhythms discernible by touch contained in a housing to instruct medical students on the proper use of a stethoscope and

how to use a stethoscope in conjunction with touch to diagnosis cardiovascular disorders or diseases. With the antedating of Takashina et al., the Examiner has no support for a pulse simulation system, a system lacking from the combination of Eggert et al. and Lamgotang et al.

Arguments Specific to Claim 23

42. Referring to claim 23, the combination of Eggert et al. and Lamgotang et al. does not produce a device, even one using simulated body parts, which generates heart sounds discernible using a stethoscope and temporally correlated pulse rhythms discernible by touch contained in a housing to instruct medical students on the proper use of a stethoscope and how to use a stethoscope in conjunction with touch to diagnosis cardiovascular disorders or diseases. With the antedating of Takashina et al., the Examiner has no support for a pulse simulation system, a system lacking from the combination of Eggert et al. and Lamgotang et al.

Arguments Specific to Claim 24

43. Referring to claim 24, while Eggert et al. discloses a tactile switch and claim 24 indicates that the tactile device can be a tactile switch, the term tactile switch as used in Eggert et al. and the present application are different. The Eggert et al. tactile switch is used simple to complete a circuit, while the tactile switch to the present invention is "a tactile switch that springs out in response to an electric pulse signal." See, *e.g.*, Page 13, line 3. Thus, the tactile switch of this invention is designed to receive an electrical signal from a playback device and produce a pulse rhythm. The Eggert et al. device simply completes a circuit. Eggert et al. does not disclose, teach or even suggest such a tactile device and the inclusion of such a device in the Eggert et al. apparatus would wholly eviscerate the purpose of the Eggert et al. apparatus. Moreover, Eggert et al. does not disclose, teach or suggest a resilient cover covering "a tactile switch that springs out in response to an electric pulse signal." See, *e.g.*, Page 13, line 3.

44. Combining Eggert et al. and Lamgotang et al. still does not produce a device which generates heart sounds discernible using a stethoscope and temporally correlated pulse

rhythms discernible by touch to instruct medical students on the proper use of a stethoscope and how to use a stethoscope in conjunction with touch to diagnosis cardiovascular disorders or diseases. With the antedating of Takashina et al., the Examiner has no support for a pulse simulation system, a system lacking from the combination of Eggert et al. and Lamgotang et al.

Arguments Specific to Claim 25

45. As to claim 25, Eggert et al. in view of Lamgotang et al. again combine to form a bellowed body part that have heart sounds and breathing sounds, but not correlated pulse. Claim 25 includes a more complex device including a playback unit supplying singles to an audio unit and two tactile units, one for a right side pulse and one for a left side. The audio unit includes a surface on which a stethoscope listening end is placed and a touch pad on which a finger is rested. The playback unit then generates signals that produce heart sounds and temporally correlated pulses. A medical student is then taught how to properly interpret such heart sounds and pulse rhythms. Using two tactile devices, medical students are taught to recognize certain disorders that relate to differences in the right side and left side pulse rhythms.

Arguments Specific to Claim 26

46. Referring to claim 26, while Eggert et al. discloses a tactile switch and claim 26 indicates that the tactile device can be a tactile switch, the term tactile switch as used in Eggert et al. and the present application are different. The Eggert et al. tactile switch is used simple to complete a circuit, while the tactile switch to the present invention is "a tactile switch that springs out in response to an electric pulse signal." See, *e.g.*, Page 13, line 3. Thus, the tactile switch of this invention is designed to receive an electrical signal from a playback device and produce a pulse rhythm. The Eggert et al. device simply completes a circuit. Eggert et al. does not disclose, teach or even suggest such a tactile device and the inclusion of such a device in the Eggert et al. apparatus would wholly eviscerate the purpose of the Eggert et al. apparatus.

47. Combining Eggert et al. and Lamgotang et al. still does not produce a device which

generates heart sounds discernible using a stethoscope and temporally correlated pulse rhythms discernible by touch to instruct medical students on the proper use of a stethoscope and how to use a stethoscope in conjunction with touch to diagnosis cardiovascular disorders or diseases. With the antedating of Takashina et al., the Examiner has no support for a pulse simulation system, a system lacking from the combination of Eggert et al. and Lamgotang et al.

Arguments Specific to Claim 27

48. Referring to claim 27, while Eggert et al. discloses a tactile switch and claim 27 indicates that the tactile device can be a tactile switch, the term tactile switch as used in Eggert et al. and the present application are different. The Eggert et al. tactile switch is used simple to complete a circuit, while the tactile switch to the present invention is "a tactile switch that springs out in response to an electric pulse signal." See, *e.g.*, Page 13, line 3. Thus, the tactile switch of this invention is designed to receive an electrical signal from a playback device and produce a pulse rhythm. The Eggert et al. device simply completes a circuit. Eggert et al. does not disclose, teach or even suggest such a tactile device and the inclusion of such a device in the Eggert et al. apparatus would wholly eviscerate the purpose of the Eggert et al. apparatus. Moreover, Eggert et al. does not disclose, teach or suggest a resilient cover covering "a tactile switch that springs out in response to an electric pulse signal." See, *e.g.*, Page 13, line 3.

49. Combining Eggert et al. and Lamgotang et al. still does not produce a device which generates heart sounds discernible using a stethoscope and temporally correlated pulse rhythms discernible by touch to instruct medical students on the proper use of a stethoscope and how to use a stethoscope in conjunction with touch to diagnosis cardiovascular disorders or diseases. With the antedating of Takashina et al., the Examiner has no support for a pulse simulation system, a system lacking from the combination of Eggert et al. and Lamgotang et al.

If additional information or communications are needed during the pendency of this Appeal, the Patent Office can contact Applicant's attorney at 713.977.7000 or by email at rwstroz@flash.net.

Respectfully submitted,

A handwritten signature in black ink, appearing to be 'R. Strozier', written over a horizontal line.

Robert W. Strozier

Registration No. 34,024

Date: 9 December 2004

(9) *Appendix - Copy of Claims involved in this Appeal*

This appeal is from the final rejection of claims 1-2 and 8-27 which read as follows:

1 **1.(previously amended)** An apparatus for simulating a pulse and correlated heart beat of
2 an animal, the apparatus comprising a playback device for generating a first electronic signal
3 corresponding to a pulse and a second electronic signal corresponding to a correlated heart
4 beat, a tactile pulse simulator for receiving the pulse signal and generating a pressure pulse
5 discernible by touch and an audio simulator for receiving the correlated heart beat signal and
6 recreating the heart beat to be heard through a stethoscope.

1 **2.(previously amended)** An apparatus for simulating a right side pulse and a left side
2 pulse and correlated heart beat of an animal, the apparatus comprising a playback device for
3 generating a first electronic signal corresponding to the right side pulse, a second electronic
4 signal corresponding to the left side pulse and a third electronic signal corresponding to a
5 correlated heart beat, a first tactile pulse simulator for receiving the right pulse signal and
6 generating a pressure pulse discernible by touch, a second tactile pulse simulator for
7 receiving the left pulse signal and generating a pressure pulse discernible by touch and an
8 audio simulator for receiving the correlated heart beat signal and recreating the heart beat to
9 be heard through a stethoscope.

1 **3.(withdrawn)** A method for training health care provides in the proper use of a
2 stethoscope including the steps of placing a user's finger on a tactile pulse simulator of the
3 apparatus of claim 1, placing a stethoscope listening end on an audio heart beat simulator,
4 placing stethoscope ear pieces in a user's ear and sensing different cardiovascular conditions
5 including normal and abnormal conditions.

1 **4.(withdrawn)** A method for training health care provides in the proper use of a

2 stethoscope including the steps of placing a first finger on a right side tactile pulse simulator
3 of the apparatus of claim 2, placing a second finger on a left side pulse simulator, placing a
4 stethoscope listening end on a audio heart beat simulator, placing stethoscope ear pieces in
5 a user's ear, generating a pulse and correlated heart beat signal in a playback unit and sensing
6 different cardiovascular conditions including normal and abnormal conditions.

1 5.**(withdrawn)** A system comprising a digital processing unit (DPU) subsystem having
2 a user interface, bodily attribute generation software and an input apparatus and output
3 apparatus for human-DPU interaction, a visual output subsystem, an acoustic output
4 subsystem, and/or a tactile output subsystem, where the input and output apparatus, the
5 generation software and the output subsystems operate to visually, acoustically and tactually
6 simulate different animal including human conditions so that the visual, audio and tactile
7 outputs are temporally coupled for a more realistic simulation of symptoms of a desired
8 condition.

1 6.**(withdrawn)** An apparatus including a digital processing unit (DPU) having a user
2 interface, a bodily attribute generation software and an input device and output device for
3 human-DPU interaction, a visual output device in communication with the DPU, an acoustic
4 output device in communication with the DPU and/or a tactile output device in
5 communication with the DPU, where the DPU, through interaction with a user via the input
6 and output devices, the generation software and the output subsystems, visually, acoustically
7 and/or tactually simulates different animal including human conditions so that the visual,
8 audio and tactile outputs are temporally coupled for a more realistic simulation of symptoms
9 of the desired condition.

1 7.**(withdrawn)** A method for training/teaching a user, where the method includes
2 interacting with a user interface of a DPU via an input apparatus and output apparatus and
3 identifying a condition of an animal including a human from audio, visual and/or tactile

4 output generated in the DPU and outputted to an audio output, a visual output and/or a tactile
5 output which simulate symptoms of the condition from a list of conditions generated by the
6 DPU.

1 8.**(previously presented)** The apparatus of claim 1, wherein the tactile pulse simulator
2 comprises a tactile switch, collapsible tube apparatus or piezoelectric transducer.

1 9.**(previously presented)** The apparatus of claim 1, wherein the tactile pulse simulator and
2 the audio simulator are housed within a housing.

1 10.**(previously presented)** The apparatus of claim 9, wherein the tactile pulse simulator
2 comprises a resilient cover covering a tactile switch.

1 11.**(previously amended)** The apparatus of claim 9, wherein the housing comprises a
2 simulated upper part of a human body including a simulated chest portion and simulated arm
3 portion.

1 12.**(previously amended)** The apparatus of claim 11, wherein the tactile pulse simulator is
2 located in the arm portion at a wrist portion corresponding to a location used by medical
3 professionals to detect and monitor a patient's pulse and the audio simulator is located within
4 the chest portion.

1 13.**(previously presented)** The apparatus of claim 12, wherein the tactile pulse simulator
2 comprises a resilient cover covering a tactile switch.

1 14.**(previously presented)** The apparatus of claim 1, wherein the tactile pulse simulator is
2 within in a first housing and the audio simulator is within a second housing.

1 15.(previously amended) The apparatus of claim 14, wherein the first housing simulates
2 a human wrist and the tactile pulse simulator comprises a resilient cover covering a tactile
3 switch and is located at a position in the wrist corresponding to a position in a patient where
4 a pulse is detected and monitored by a medical professional.

1 16.(previously presented) The apparatus of claim 2, wherein the tactile pulse simulators
2 comprise tactile switches, collapsible tube apparatuses or piezoelectric transducers.

1 17.(previously amended) The apparatus of claim 2, wherein the tactile pulse simulators and
2 the audio simulator are housed within a housing, where the housing comprises a simulated
3 upper part of a human body including a simulated chest portion, a simulated right arm portion
4 and a simulated left arm portion.

1 18.(previously presented) The apparatus of claim 17, wherein the right pulse tactile pulse
2 simulator is located in the right arm portion at a right wrist portion corresponding to a
3 location used by medical professionals to detect and monitor a patient's right pulse, the left
4 pulse tactile pulse simulator is located in the left arm portion at a left wrist portion
5 corresponding to a location used by medical professionals to detect and monitor a patient's
6 left pulse and the audio simulator is located within the chest portion.

1 19.(previously presented) The apparatus of claim 18, wherein the tactile pulse simulators
2 comprise a resilient cover covering a tactile switch.

1 20.(previously presented) An apparatus for simulating a right side pulse and a left side
2 pulse and correlated heart beat of a human, the apparatus comprising:

3 a housing including:

4 a simulated upper human body portion having:

5 a chest portion,

6 a right arm portion, and

7 a left arm portion;

8 a playback device for generating a first electronic signal corresponding to the right
9 side pulse, a second electronic signal corresponding to the left side pulse and a third
10 electronic signal corresponding to a correlated heart beat;

11 a first tactile pulse simulator for receiving the right pulse signal and generating a
12 pressure pulse discernible by touch, where the first tactile pulse simulator is located at an
13 lower inner arm position in the right arm of the housing so that the right pulse can be felt;

14 a second tactile pulse simulator for receiving the left pulse signal and generating a
15 pressure pulse discernible by touch, where the second tactile pulse simulator is located at an
16 inner wrist position in the left arm of the housing; and

17 an audio simulator for receiving the heart beat signal and generating an audible
18 recreation of the correlated heart beat, where the audio simulator is located in the chest
19 portion of the housing so that the heart beat can be heard through a stethoscope position on
20 a surface of the chest portion of the housing.

1 21.**(previously presented)** The apparatus of claim 20, wherein the tactile pulse simulators
2 comprise tactile switches, collapsible tube apparatuses or piezoelectric transducers.

1 22.**(previously presented)** The apparatus of claim 20, wherein the tactile pulse simulators
2 and the audio simulator are housed within a housing, where the housing comprises a
3 simulated an upper part of a human body including a simulated chest portion, a simulated
4 right arm portion and a simulated left arm portion.

1 23.**(previously presented)** The apparatus of claim 22, wherein the right pulse tactile pulse
2 simulator is located in the right arm portion at a right wrist portion corresponding to a
3 location used by medical professionals to detect and monitor a patient's right pulse, the left
4 pulse tactile pulse simulator is located in the left arm portion at a left wrist portion

5 corresponding to a location used by medical professionals to detect and monitor a patient's
6 left pulse and the audio simulator is located within the chest portion.

1 24.(previously presented) The apparatus of claim 23, wherein the tactile pulse simulators
2 comprise a resilient cover covering a tactile switch.

1 25.(previously presented) An apparatus for simulating a right side pulse and a left side
2 pulse and correlated heart beat of a human, the apparatus comprising:

3 a playback device for generating a first electronic signal corresponding to the right
4 side pulse, a second electronic signal corresponding to the left side pulse and a third
5 electronic signal corresponding to a correlated heart beat;

6 a first housing including a first tactile pulse simulator for receiving the right pulse
7 signal and generating a pressure pulse corresponding to a right arm pulse discernible by
8 touch;

9 a second housing including a second tactile pulse simulator for receiving the left pulse
10 signal and generating a pressure pulse corresponding to a left arm pulse discernible by touch;
11 and

12 a third housing including an audio simulator for receiving the heart beat signal and
13 generating an audible recreation of the correlated heart beat and designed to be heard through
14 a stethoscope position on a surface of the housing.

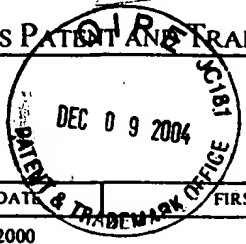
1 26.(previously presented) The apparatus of claim 25, wherein the tactile pulse simulators
2 comprise tactile switches, collapsible tube apparatuses or piezoelectric transducers.

1 27.(previously presented) The apparatus of claim 25, wherein the tactile pulse simulators
2 comprise a resilient cover covering a tactile switch.

Bob's Copy



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/699,805	10/30/2000	William Thornton	98006/17UTL	8722
23873	7590	11/09/2004	EXAMINER	
ROBERT W STROZIER, P.L.L.C PO BOX 429 BELLAIRE, TX 77402-0429			ART UNIT	PAPER NUMBER

DATE MAILED: 11/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Continuation of 9. Other (including any explanation in support of the above items): Regarding requirement of 37 CFR 1.192(c)(3), the applicant is required to identify the status of all claims and which claims are to be considered for appeal.

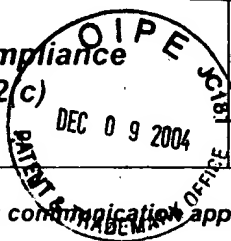
Regarding requirement of 37 CFR 1.192(c)(4), the applicant is required to identify the status of any amendments made subsequent to the final rejection in the case. The applicant has included the text of the final rejection in the appeal.

Regarding requirement of 37 CFR 1.192(c)(5), the applicant is required to provide a concise statement of the invention and refer to the page and item numbers in the specification for support of the statements in the summary. Applicant has provided no listing of page and numbers in support of the summary presented.

Regarding requirement of 37 CFR 1.192(c)(7), the applicant is required to present groupings of all claims to be considered as individual groups from which a single claim will be selected to represent the entire group unless a statement that all of the claims in the group do not stand or fall together is included. The applicant has provided no claim groupings and no indication of whether the claims do or do not stand or fall together.

Regarding requirement of 37 CFR 1.192(c)(8), the applicant is required to submit arguments for each ground of rejection identified in the final rejection following the format set forth in MPEP 1206(c)(8). Applicant has not submitted arguments for each ground of rejection. .

**Notification of Non-Compliance
With 37 CFR 1.192(c)**



Application No.

09/699,805

Applicant(s)

THORNTON, WILLIAM

Examiner

John L Sotomayor

Art Unit

3714

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

The Appeal Brief filed on 17 August 2004 is defective for failure to comply with one or more provisions of 37 CFR 1.192(c). See MPEP § 1206.

To avoid dismissal of the appeal, applicant must file IN TRIPLICATE a complete new brief in compliance with 37 CFR 1.192(c) within the longest of any of the following three **TIME PERIODS**: (1) **ONE MONTH or THIRTY DAYS** from the mailing date of this Notification, whichever is longer; (2) **TWO MONTHS** from the date of the notice of appeal; or (3) within the period for reply to the action from which this appeal was taken. **EXTENSIONS OF THESE TIME PERIODS MAY BE GRANTED UNDER 37 CFR 1.136.**

1. ☐ The brief does not contain the items required under 37 CFR 1.192(c), or the items are not under the proper heading or in the proper order.
2. ☒ The brief does not contain a statement of the status of all claims, pending or cancelled, or does not identify the appealed claims (37 CFR 1.192(c)(3)).
3. ☒ At least one amendment has been filed subsequent to the final rejection, and the brief does not contain a statement of the status of each such amendment (37 CFR 1.192(c)(4)).
4. ☒ The brief does not contain a concise explanation of the claimed invention, referring to the specification by page and line number and to the drawing, if any, by reference characters (37 CFR 1.192(c)(5)).
5. ☐ The brief does not contain a concise statement of the issues presented for review (37 CFR 1.192(c)(6)).
6. ☒ A single ground of rejection has been applied to two or more claims in this application, and
 - (a) ☒ the brief omits the statement required by 37 CFR 1.192(c)(7) that one or more claims do not stand or fall together, yet presents arguments in support thereof in the argument section of the brief.
 - (b) ☐ the brief includes the statement required by 37 CFR 1.192(c)(7) that one or more claims do not stand or fall together, yet does not present arguments in support thereof in the argument section of the brief.
7. ☒ The brief does not present an argument under a separate heading for each issue on appeal (37 CFR 1.192(c)(8)).
8. ☐ The brief does not contain a correct copy of the appealed claims as an appendix thereto (37 CFR 1.192(c)(9)).
9. ☒ Other (including any explanation in support of the above items):

See Continuation Sheet